



SATURN FLEX SYSTEMS

Customer P/N:	
SFS Job#:	
Date:	

All quick-turn jobs with 3 days or less lead time will be started prior to receiving approval. All other jobs will be started 48 hours after this approval form is sent unless email is received to put order on hold until approval is received. Approval required more than 24 hours after plots are sent will require ship date extension.

Please email confirmation to sender.

Violations found that need to be addressed by customer?

Yes / No

COPPER LAYERS - Outer

Values in mils (0.001")

To delete highlighted cells and shift left: 'Alt+E+D+L'

DFM	1.5 OUNCE FINISHED COPPER				2 OUNCE FINISHED COPPER				3 OUNCE FINISHED COPPER			
	MINIMUM	PREFERRED	OK to Go?	See Figure	MINIMUM	PREFERRED	OK to Go?	See Figure	MINIMUM	PREFERRED	OK to Go?	See Figure
PAD TO PAD	5	6	OK		6	7	OK		8	9	OK	
PAD TO CIRCUIT	5	6	OK		6	7	OK		8	9	OK	
CIRCUIT TO CIRCUIT	5	6	OK		6	7	OK		8	9	OK	
LINE WIDTH	4	5	OK		5	6	OK		7	8	OK	
THERMAL SPOKE WIDTH	7	10	OK		8	10	OK		10	12	OK	
THERMAL MOAT WIDTH	10	12	OK		10	12	OK		10	12	OK	

COPPER LAYERS - Inner

DFM	0.5 OUNCE FINISHED COPPER				1 OUNCE FINISHED COPPER				2 OUNCE FINISHED COPPER			
	MINIMUM	PREFERRED	OK to Go?	See Figure	MINIMUM	PREFERRED	OK to Go?	See Figure	MINIMUM	PREFERRED	OK to Go?	See Figure
PAD TO PAD	4	5	OK		6	7	OK		8	9	OK	
PAD TO CIRCUIT	4	5	OK		6	7	OK		8	9	OK	
CIRCUIT TO CIRCUIT	4	5	OK		6	7	OK		8	9	OK	
LINE WIDTH	4	5	OK		5	6	OK		7	8	OK	
THERMAL SPOKE WIDTH	7	10	OK		8	10	OK		10	12	OK	
THERMAL MOAT WIDTH	10	12	OK		10	12	OK		10	12	OK	

FABRICATION FEATURES

	MINIMUM	PREFERRED	OK to Go?	See Figure	
NPTH TO PAD	10	10	OK		
NPTH TO CIRCUIT	10	10	OK		
ROUT TO COPPER	5	7	OK		
SCORED EDGE TO COPPER	15	15	OK		
PTH to Rigid Edge	15	20	OK		
Trace to Flex Edge (edge insulation)	10	15	OK		
Outside Dimensional Tolerance (Rigid)	5	5	OK		
Outside Dimensional Tolerance (Flex)	10	15	OK		
PTH TO COPPER (INNER LAYERS)	10	12	OK		APPLIES TO DRILL SIZE. FORMULA IS: (FINISHED HOLE SIZE + 25 MILS)
PTH ANNULAR RING	5	7	OK		APPLIES TO DRILL SIZE. FORMULA IS: (FINISHED HOLE SIZE + 15 MILS)



SATURN FLEX
S Y S T E M S

Customer P/N:	
SFS Job#:	
Date:	

All quick-turn jobs with 3 days or less lead time will be started prior to receiving approval. All other jobs will be started 48 hours after this approval form is sent unless email is received to put order on hold until approval is received. Approval required more than 24 hours after plots are sent will require ship date extension.

Please email confirmation to sender.

Violations found that need to be addressed by customer?

Yes / No

			Yes / No	
PTH Diameter Tolerance - Solder Finish	3	3	OK	Solder finish is not capable to hold < +/- 0.003" diameter tolerance.
PTH Diameter Tolerance - Immersion Finish	2	3	OK	
VIA ANNULAR RING	5	7	OK	VIAS ARE TREATED AS +.000/-HOLE SIZE
NPTH larger than 0.250"	No	No	OK	NPTH that are larger than 0.250" must be created at Routing. Location and size tolerance is +/- 0.005"
NPTH Drilled at Secondary Drill	No	No	OK	NPTH that have copper pads or are closer than 0.010" to nearest copper feature must be drilled at secondary drill. Location toler
Blind Via Aspect Ratio	1:1	0.75:1	OK	
Stackup Thicknesses / Tolerances			OK	The aspect ratio should be taken as maximum values instead of minimum per the header; be sure to include surface copper as p

SOLDERMASK

	MINIMUM	PREFERRED	OK to Go?	See Figure
NPTH ANNULAR RING	10	14	OK	
VIA PAD ANNULAR RING	0	0	OK	
PTH PAD ANNULAR RING	2	3	OK	
Coverlay to Feature Clearance	10	15	OK	
SMD ANNULAR RING	2	3	OK	
MASK DAM	3	3	OK	
COVERAGE	2	3	OK	Be sure to incorporate 3 mil clearances around SMT pads.

SILKSCREEN

	MINIMUM	PREFERRED	OK to Go?	See Figure
MINIMUM LINE WIDTH	5	5	OK	

STANDARD DFM MODIFICATIONS (FYI)

	Adjusted Value	
Silkscreen to Soldermask Opening	2	To prevent silkscreen from encroaching solderable areas
Soldermask opening to Copper	3	To prevent soldermask from encroaching solderable areas



Customer P/N:	
SFS Job#:	
Date:	

All quick-turn jobs with 3 days or less lead time will be started prior to receiving approval. All other jobs will be started 48 hours after this approval form is sent unless email is received to put order on hold until approval is received. Approval required more than 24 hours after plots are sent will require ship date extension.

Please email confirmation to sender.

Violations found that need to be addressed by customer?

Yes / No

Minimum Bend Radius (FYI)

	Min Bend Radius (multiple of circuit thickness)	
	Min.	Max.
1 Metal Layer	3	6
2 Metal Layers	6	10
Multilayers	10	15
Dynamic Flex (1L Recommended)	20	40

Customer Signoff:

Name (typed): _____

Date: _____